

digital **X** *bus*



high-definition production console

MACKIE.[®]







The Digital X Bus' ergonomic layout puts hardware controls directly in line with the corresponding functions on its dual 15" touch screens. These touch screens use next-generation 5-wire technology and a new positional sensing algorithm for unrivaled accuracy. They can take a beating too—rated at over 35 million finger pokes, the touch screens will likely outlast your fingers.



Want to tweak a channel's EQ? Simply touch the EQ graphic on the desired on-screen channel strip, and the full channel EQ will enlarge directly in-line with the channel rotary encoders on the control surface.

high-definition production console



INTRODUCING THE **DIGITAL X BUS** HIGH-DEFINITION PRODUCTION CONSOLE.

It was inevitable, really. Thanks to their ever-advancing horsepower and convenience, computers have become central to modern audio production. Yet no affordable mixing console to date has been designed to integrate seamlessly with today's varied production techniques— analog, digital or hybrid. So after more than two years of intense research and development at Mackie and SaneWave, we proudly introduce the digital desk of the future: the Mackie Digital X Bus High-Definition Digital Production Console.

A DIGITAL DESK WITHOUT COMPROMISE

Developed to bring you features currently unmatched by consoles costing five times as much, the X.200 and X.400 offer an upgradeable 192kHz-capable mix engine; dual 15" touch screens; 100mm Penny + Giles optical touch faders; onboard control of a variety of DAWs, including Pro Tools, Logic, and Nuendo; VST™ plug-in support; and streaming digital audio between the Digital X Bus and your Mac or PC via FireWire. Not to mention a full rear-panel card cage so you can configure the Digital X Bus' I/O to suit your studio's exact needs, now and in the future.

Designed for professional tracking and mixing applications, the X.200 model offers 64 simultaneous inputs and outputs, accessed from a variety of 8-channel analog or digital I/O cards. Its flexible I/O card cage supports up to 64 analog mic/line inputs featuring digitally controlled mic trims; digital interface cards in formats such as AES/EBU, TDIF, and ADAT optical; as well as FireWire I/O cards capable of streaming audio and MIDI to any FireWire-equipped Mac or PC.

For those doing surround and post-production, the X.400 model ups the performance ante with dual processors for massive mix horsepower, an extra card slot providing an additional 24 channels of I/O for a total of 92 inputs and 100 outputs at 96kHz, as well as more advanced surround sound functionality

with up to 24 busses. In addition, the X.400 ships with Universal Audio's UAD-1 DSP card preloaded, providing instant access to a full complement of powerful Universal Audio™ plug-ins.

OH, BEAUTIFUL INTERFACE

Of course, all the advanced technology in the world is useless if you can't get to it quickly, so we gave the Digital X Bus dual 15" touch screens—a first in this class of console. These touch screens put all



major features and functions at your fingertips as "virtual" controls, with big, button-style graphics and a bare minimum of hierarchy. With advanced 5-wire technology and a proprietary tracking algorithm, the touch screens deliver incredibly accurate response. And they're built tough too, with an operating life that's rated at over 35 million finger pokes.

Of course, for fast adjustments, there are 24 rotary encoders (er, knobs), corresponding to the graphics on the screens directly above. And commonly used features such as mute, solo, pan, faders, and switches remain in hardware, just the way your fingers like. There's also built-in USB ports so you can use your favorite mouse or PC keyboard, a smooth weighted jog wheel, and rock-solid transport buttons. This multi-control approach lowers the learning curve to the point that most users can start working from the moment the console boots—without the need for manual digging.



The Digital X Bus' full rear-panel card cage allows you to configure I/O exactly as you see fit, with analog mic /line cards, digital cards, FireWire cards and more. It comes with the Sync Card and Mix Out Card pre-installed.

STREAMING FIREWIRE I/O



It's the 21st Century, so we felt it was time for a console that could work seamlessly with FireWire-equipped Macs and PCs. When equipped with the optional FireWire card, the Digital X Bus can stream digital audio between any Mac OSX Core Audio or Windows XP and ASIO compatible DAW software. FireWire has the bandwidth to allow recording/playback of audio, effect send/returns, and it supports the use of multiple FireWire cards simultaneously. So you can load up your laptop with the latest plug ins, for example, and stream away.

VST PLUG-IN SUPPORT



Speaking of plug-ins, with its extensive processing power, the Digital X Bus is also the first digital console which runs select VST plug-ins internally. Currently, the console supports popular plug-ins from manufacturers such as Waves, IK Multimedia, Nomad Factory, Antares, and the full suite of Universal Audio plug-ins via the UAD-1 DSP card (which is included in the X.400 model). Better still, all plug-in windows are displayed right on the built-in screens, just as they would be on your PC.

FUTURE-PROOF ARCHITECTURE

The Digital X Bus' "modular" hardware architecture provides access to internal components simply by removing the rear panel and sliding out that portion of the chassis. So, as the mood strikes, you can opt to add more RAM, swap or add I/O cards, and basically customize the mixer to your individual tracking and mixing needs. Importantly, the Digital X Bus series allows all sample-rate related components to be upgraded, so you won't be left behind if or when new audio standards emerge.

UNDER THE HOOD

When it came to the internal processing, we rewrote the book—developing a proprietary architecture with the largest-capacity, highest-performance PCI-based Accelerator Card ever created for the pro audio market. This Accelerator Card employs a Field Programmable Gate Array (FPGA) chip to handle the conversion of integer to floating-point math. In simple terms, this means the Accelerator Card does the hard work so the internal processor is free to handle the toughest of mixing applications while simultaneously running VST plug-ins. It also provides extremely low total system latency from analog input to analog output.

INTEGRATED SOFTWARE CONTROL

DIGIDESIGN PRO TOOLS
APPLE / EMAGIC LOGIC
STEINBERG CUBASE SX/SL
STEINBERG NUENDO
MOTU DIGITAL PERFORMER
ADOBE AUDITION
CAKEWALK SONAR
SONY VEGAS

Thanks to its integrated Mackie Control Universal protocol, the Digital X Bus can seamlessly control software ranging from Logic to Pro Tools, Nuendo, Performer, Sonar and more. Better still, the console can be flipped into software control mode with a single button press. In this way, you can place a Digital X Bus at the center of your DAW-based studio and have the best of both worlds—hardware and software.



I/O OPTION CARDS

The Digital X Bus' open architecture means you can configure the console's I/O as you see fit, without having to pay for I/O formats you'll never use. The console ships with two I/O Option cards out of the box—the Sync Card, which provides Word Clock and LTC I/O, and the Mix Out Card, which provides control room and phones outputs, as well as analog and digital outputs for the main mix bus.

Mic/Line 4 Card: 4 XLR balanced analog mic/line inputs • 4 TRS balanced analog line level inputs
• Digitally remote-controlled mic preamps • Independent phantom power (+48v) per mic input channel

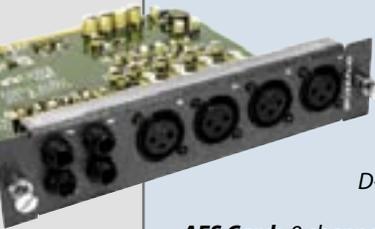
Mic/Line 8 Card: 8 balanced analog mic/line inputs • 8 balanced analog line level outputs • Independent phantom power (+48v) per input channel • Digitally remote-controlled mic preamps • 2 female 25-pin D-Sub connectors

Line Card: 8 channels of balanced analog line level inputs and outputs • +4dB/-10dBV jumpers for each channel
• 2 female 25-pin D-Sub connectors

Digital Card: 8 channels of ADAT® optical digital audio input and output at 96kHz (4 channels at 192kHz) • Up to 8 channels of TDIF digital audio input and output at 96kHz
• Direct digital connection between the console and external digital devices • Female 25-pin D-Sub connector (TDIF) and four Toslink optical connectors (ADAT x 2)

AES Card: 8 channels of AES/EBU digital audio input and output at 96kHz • Direct digital connection between the console and other AES/EBU compliant equipment • Uses one female 25-pin D-Sub connector

FireWire® Card: Direct digital audio streaming between the console and any compatible computer running Windows XP or Mac OS X • ASIO 2.0, WDM, and OS X Core Audio compliant • 2 IEEE 1394a FireWire ports





DIGITAL X BUS FEATURES

(Applicable to both X.200 and X.400 models)

- 96kHz digital mixing console with selectable operation up to 192kHz
- FireWire I/O option cards for streaming audio to/from desktop or laptop computers
- Dual 15" touch-screen graphic user interfaces plus mouse control
- Twenty-five 100mm Penny + Giles motorized optical touch-sensitive faders
- Full channel processing package including dual DSP inserts, parametric EQ and dynamics section
- Support for select VST plug-ins, including the use of the Universal Audio UAD-1 Card
- Full surround mixing and monitoring capabilities
- Floating insert points for accessing external processing equipment from any channel, aux, or bus
- Tape-style transport with memory location recall and weighted Jog/Shuttle wheel
- Comprehensive automation system with event editing and dynamic/scene automation
- LTC (SMPTE), MTC, MMC, and Word Clock sync
- Mackie Control Universal™ Layer for all 24/25 faders with "Virtual Overlays" for Pro Tools™, Logic™, Nuendo™, etc.
- Various metering options, including VU meter, full size meter bridge, and scalable metering ranges
- Full Control Room section including dual phones, talkback, surround level control and calibration to reference level
- Multiple USB 2.0 ports for connecting CD ROM drives, Flash drives, keyboard/mouse, or other add-ons
- Internal white & pink noise and variable tone generator with spectrum analyzer display
- Unique "Fader Swap" function to use faders for controlling all parameters, including EQ and VST plug-ins
- RS-422 (Sony® 9-pin) Control



X.400 FEATURES

- 92 input, 100 output matrix at 96kHz (24 more channels of I/O than the X.200)
- 46 input, 50 output matrix at 192kHz
- Dual processor architecture with hyper-threading
- 24 Mix/Surround busses assignable to multiple destinations including L/R Mix
- Bus Source/Return Switcher Panel for all busses
- Flexible Panning Law/Assignment for custom Stem management
- 24x8 Speaker Output Assignment Matrix with Cut/Solo for each output
- Universal Audio UAD-1 Powered Plug-ins Card built in
- 24 VCA-style Group Channels
- Lock feature to bypass bank switching for specific channels
- Mix-Minus Configuration for all 24 busses with Copy L/R mix feature
- Supports any combination of analog or digital I/O option cards, including digitally controlled mic preamps
- Surround Monitoring Formatter for "Fold Down" Monitoring
- Custom cherry wood side panels

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